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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STUART S. GOLDSTEIN,
JOHN H. THURTELL, JOHN W. VIETS,
TOMAS R. MELLI, and
JASON R. VOLLBRACHT

Appeal 2008-005787
Application 10/690,801
Technology Center 1700

Decided: September 4, 2009

Before CATHERINE Q. TIMM, JEFFREY T. SMITH, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 through 4, 6 through 8, and 10 through 20, which are all of the claims pending in the above-identified application. We have jurisdiction pursuant to 35 U.S.C. § 6.

We AFFIRM.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a method for the conversion of a fixed-bed catalytic reformer unit. Claim 1, which is reproduced from the Claims Appendix section of the Appeal Brief (App. Br. 20), is illustrative:

1. A method for the conversion of a fixed-bed catalytic reformer unit to moving bed reactor operation without a dedicated continuous catalyst regenerator, the method comprising:

converting each fixed bed reforming reactor of a fixed-bed catalytic reformer unit which includes a plurality of fixed bed reactors connected in a series train for reformer charge flow from one reactor to the next in the train to a moving-bed catalytic reformer unit comprising a series train of moving bed reactors that allows continuous or intermittent addition of freshly regenerated catalyst to a catalyst inlet of the first moving-bed reactor of the series train and continuous or intermittent removal of spent catalyst from a catalyst outlet of the last moving-bed reactor of the series train, with each moving bed reactor connected in the train for reformer charge flow and for reforming catalyst flow from one reactor to the next in the train;

adding continuous or intermittent catalyst feeding facilities at the catalyst inlet of the moving bed reactor train for charging fresh or regenerated catalyst continuously or intermittently to the first continuous moving-bed reactor through the catalyst inlet of the first reactor and feeding regenerated catalyst to the catalyst inlet of the first reactor in the train;

adding spent catalyst recovery facilities for collecting the spent catalyst from the catalyst outlet of the last moving bed reactor of the series train, there being no dedicated continuous regenerator integrated with the series moving bed reactor train, and transferring the spent catalyst to a reforming catalyst regeneration facility which is not integrated with the record train from which the catalyst is removed;

operating the moving-bed reactors at an effective pressure lower than the pressure at which the fixed bed reactor is operated before the conversion to improve reformate quality and yield relative to those of the reformate product from the fixed-bed unit before the conversion;

removing continuously or intermittently spent catalyst from the last moving-bed reactor of the series train; and transferring it to the non-integrated regeneration facility for regeneration.

As evidence of unpatentability of the claimed subject matter, the Examiner relies upon the following references:

Dufresne US 5,854,162 Dec. 29, 1998

M. W. Golem et al., "Conversion of Fixed-Bed Reformers to UOP CCR Platforming Technology," AM-89-47 (undated)(hereinafter "Golem")

As evidence of patentability of the claimed subject matter, Appellants rely upon the following additional reference:

NPRA 2003 Annual Meeting, "Cycle XTM System for Increased Hydrogen from a Fixed-Bed Reformer" (hereinafter "the NPRA 2003 Annual Meeting paper")

The Examiner maintains the rejection of claims 1-4, 6-8, and 10-20 under 35 U.S.C. 103(a) as unpatentable over the combined disclosures of Golem and Dufresne.

Appellants focus their arguments on claims 1, 4, 8, 11, 12, 18, 19, and 20. (Br. 9-19). We address Appellants' arguments regarding these claims; the non-argued claims standing or falling therewith. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2009).

ISSUES

The issues are as follows: (1) Have Appellants shown reversible error in either of the Examiner's findings that Golem teaches the conversion scheme of replacing all of the fixed bed reactors with moving bed reactors and Dufresne teaches catalyst handling facilities at the inlet and outlet of the moving bed

reactor sequence, or the Examiner's reason for employing Dufresne's offsite regenerator for Golem's onsite regenerator within the meaning of § 103(a)? and (2) If not, then would the combination of Golem and Dufresne considered anew in light of Appellants' arguments and evidence of long-felt but unsolved need have been probative of nonobviousness? We decide these issues in the negative.

FINDINGS OF FACT (FF)

1. Golem teaches converting a fixed-bed catalytic reforming unit to a Continuous Catalyst Regeneration (CCR) Platforming unit via a full CCR Platforming conversion. (Golem, pp. 1 and 12-13). The modification requires, *inter alia*, replacing the existing side-by-side reactor train with a modern, moving-bed stacked reactor system and "the [a]ddition of a 2,000 lb/hr CCR regenerator." (Golem, p. 13 and Figure 10). Golem teaches the operating pressure of the CCR Platforming unit is lower than the operating pressure of the fixed-bed catalytic reforming unit. (Golem, pp. 4 and 14). Golem is silent regarding an offsite regenerator.
2. Golem's Figure 10 illustrates a flow scheme for a CCR Platforming unit having a flow line to show the transport of fresh catalyst from the bottom of the regenerator to the top of the reactor and another flow line to show the transport of spent catalyst from the bottom of the reactor to the top of the regenerator. (Golem, Figure 10).
3. Golem teaches that "[t]he benefits of low-pressure reformer operations have been recognized for over 20 years." (Golem, p. 2). Golem teaches in one example that its fixed-bed design operates at 175 psig. (Golem,

- pp. 2-3). Golem teaches in another example that the CCR Platforming unit converted via its Full CCR Platforming conversion operates at 100 psig. (Golem, pp. 12-14).
4. Golem teaches that the Hybrid CCR Platforming conversion "retain[s] the existing reactor section without modifications and add[s] a last reactor which employs CCR technology," which may be a moving-bed reactor. (Golem, pp. 6-7).
 5. Golem also teaches that
[i]f the revamp is the first step . . . toward full CCR Platforming operations, the CCR regenerator is sized for . . . [the] future reactor stack that replaces the entire reactor train. The cost of the larger regenerator is significant and the project cost approaches that of a full CCR Platforming conversion. (Golem, p. 7).
 6. Dufresne teaches offsite regeneration, which is known to use an offsite regenerator, of used hydrocarbon treatment catalyst, which may be a catalyst from a continuous reforming process, which may be a CCR process where the "catalyst progressively flows (circulating bed) through a number of reaction zones." (Dufresne, col. 1, ll. 5-17 and 60-67, col. 3, ll. 6-11 and 30-37, and col. 4, ll. 15-20). Dufresne teaches that offsite regeneration allows better control of the catalyst regeneration than does onsite regeneration. (Dufresne, col. 4, ll. 20-38).
 7. Dufresne teaches that "catalyst is removed from the reaction zones in the refinery then regenerated before its return to these zones." (Dufresne, col. 4, ll. 35-37).
 8. Dufresne also teaches that the catalyst to be regenerated at the off-site facility is from different reforming processes (i.e., different reformers)

- such as "a continuous *and/or* semi-regenerative type reforming process." (Dufresne, col. 4, ll. 16-20) (emphasis added). Appellants concede that "Dufresne's regenerator [is] shared . . . in the context of conventional type units." (Br. 18). In other words, Appellants acknowledge that Dufresne teaches it is well known in the art to use a regenerator to treat catalyst from more than one reformer.
9. Appellants describe in the Specification that the feeding facilities may include a catalyst line, loading platform; and storage drum and its recovery facilities may include "a dump nozzle at the bottom of the last reactor emptying into conventional 200 litre (55 US gallon) drums." (Spec. ¶¶ [0024] and [0030] and Fig. 1; *see also* App. Br. 4-5).

PRINCIPLES OF LAW

"During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow." *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989).

The level of ordinary skill in the art may be evidenced by the references. *See In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978)("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995)(holding that the Board did not clearly err in finding that the level of skill in the art was best determined by the references of record); *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible

error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'").

“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980).

“Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning . . .” *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971). Reconstruction is proper if it relies upon knowledge within the level of ordinary skill at the time of the invention and not upon knowledge gained solely from Appellants' disclosure. *Id.*

“[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)).

In addition, merely because “a . . . combination would not be made by businessmen for economic reasons does not mean that persons skilled in the art would not make the combination . . .” *In re Farrenkopf*, 713 F.2d 714, 718 (Fed. Cir. 1983).

“[W]here the prior art gives reason or motivation to make the claimed [invention] . . . the burden (and opportunity) then falls on an applicant to rebut that prima facie case. Such rebuttal or argument can consist of . . . [any] argument or presentation of evidence that is pertinent.” *In re Dillon*, 919 F.2d 688, 692-93 (Fed. Cir. 1990) (*en banc*) (emphasis omitted).

"[O]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references." *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

Opinion evidence in a declaration has little value without factual support. *In re Beattie*, 974 F.2d 1309, 1313 (Fed. Cir. 1992); *see also In re Lindell*, 385 F.2d 453, 456 (CCPA 1967) (Although a declarant's opinion on the ultimate legal issue is not evidence in the case, "some weight ought to be given to a persuasively supported statement of one skilled in the art on what was not obvious to him.").

Establishing long-felt need requires objective evidence that a problem existed in the art for a long period of time without solution. The relevance of long-felt need and the failure of others to the issue of obviousness depends on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. *In re Gershon*, 372 F.2d 535, 539 (CCPA 1967).

Second, the long-felt need must not have been satisfied by another before the invention by applicant. *Newell Companies v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988).

Third, the invention must in fact satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491, 496 (CCPA 1971).

ANALYSES AND CONCLUSIONS

ISSUE (1): Claim features and Reason to Combine

With respect to claims 1, 18, and 20, Appellants argue that "Golem does not teach the basis revamp or conversion scheme . . . [because] [n]othing in

Golem suggest[s] a conversion in which all the fixed bed reactors are removed and replaced by a moving bed reactor stack." (Br. 11). We disagree.

Golem teaches converting a fixed-bed catalytic reforming unit via a full CCR Platforming conversion, which requires, *inter alia*, replacing the existing side-by-side reactor train with a modern, moving-bed stacked reactor system (moving bed reactor train). (FF 1). As contrasted with Golem's Hybrid CCR Platforming conversion, a full CCR Platforming conversion includes a complete replacement of all of the reactors of the side-by-side reactor train for a moving-bed stacked reactor system (FF 1 and 4).

Thus, contrary to Appellants' arguments, we find that Golem teaches the conversion scheme of replacing all of the fixed bed reactors with a moving-bed stacked reactor system (moving bed reactor train).

Appellants next argue that "Dufresne does not suggest offsite regeneration of catalyst from continuous reforming units lacking a regenerator." (Br. 12)(emphasis omitted). In addition, Appellants argue that "[t]here is nothing in Golem which indicates the possibility of constructing or operating a continuous reforming unit without at least one fully integrated regenerator." (Br. 12)(emphasis omitted). Appellants' arguments are not persuasive because Appellants are attacking the references individually instead of addressing the combination of references on which the rejection is based. *Keller*, 642 F.2d at 426.

Rather, in light of the teachings of Golem and Dufresne highlighted in Factual Findings 1 and 6, we agree with the Examiner's determination that one of ordinary skill in the art would have been led to employ Dufresne's offsite regenerator for Golem's onsite regenerator in order to have better control of the

catalyst regeneration steps as taught by Dufresne. Therefore, we determine that the Examiner does not rely on impermissible hindsight, but rather on the knowledge of those skilled in the art at the time of the invention as a reason for making the modification to Golem.

Appellants also argue that "Dufresne does not teach the addition of the catalyst handling facilities at the inlet and outlet of the moving bed reactor sequence . . ." (Br. 13). We disagree.

Referring to Factual Findings 2 and 6-7, both Golem's illustration and Dufresne's teaching individually disclose the feeding, removing, and transporting of catalyst between the reactor and the regenerator. Thus, each of these references plainly disclose structures or mechanisms for feeding, removing, and transporting the catalyst between the reactor and regenerator. Our interpretation that Golem's and Dufresne's structures or mechanisms meet the claimed "feeding facilities" and "recovery facilities" is consistent with the Specification as it describes these facilities as including a catalyst line, dump nozzle, and storage drums (i.e., structures or mechanisms for feeding and removing the catalyst). (FF 9).

Thus, since both Golem and Dufresne individually teach catalyst feeding and recovery facilities, we determine that it would have been *prima facie* obvious to one of ordinary skill in the art to employ Dufresne's catalyst feeding and recovery facilities for Golem's. This substitution is nothing more than the predictable use of prior art elements according to their established functions (i.e., feeding and recovering catalysts). *KSR*, 550 U.S. at 416.

In addition, Appellants argue that the "level of skill in the art was *not* sufficient to render the invention obvious because it certainly was not

obvious to persons of great skill . . . The person of ordinary skill must therefore be taken to lack the insight to make the invention." (Br. 14).

To support their position, Appellants refer to the NPRA 2003 Annual Meeting paper to show that

the problem of regenerator cost was still implied by the NPRA paper [dated 2003] . . . The appearance of Dufresne [which was issued in 1998] did not . . . lead to any appreciation in the art that omission of a fully integrated regenerator was not only feasible but an attractive and desirable technical solution to this problem.

(Br. 14).

We interpret this argument two ways. First, we interpret this argument to mean that the level of skill in the art was insufficiently high for a person of ordinary skill to determine the invention as obvious. We disagree with this argument.

"[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'" *Okajima*, 261 F.3d at 1355. In reference to our above discussion, we find that both Golem and Dufresne reflect an appropriate level of ordinary skill in the art to have rendered the claimed invention obvious. This is especially true in this case since Dufresne teaches the reason for the modification (i.e., offsite regeneration offers better control of the catalyst regeneration steps than does onsite regeneration). (FF 6).

Second, we interpret this argument to mean that a person of ordinary skill in the art would not have combined Golem and Dufresne to arrive at the claimed invention. We also disagree with this argument.

In reference to our above discussion regarding the reason to combine the references, given the Golem's and Dufresne's teachings highlighted in Factual Findings 1 and 6, we agree with the Examiner's determination that one of ordinary skill in the art would have been led to employ Dufresne's offsite regenerator for Golem's onsite regenerator in order to have better control of the catalyst regeneration steps as taught by Dufresne. Thus, we do not find persuasive Appellants' argument that a person of ordinary skill in the art would not have combined Golem and Dufresne to arrive at the claimed invention.

Appellants argue that Dufresne's disclosure is "conceptually non-enabling. Dufresne does show that the *means* for achieving the advantages of moving bed reactor operation without the cost of the moving bed regenerator were available in the industry but technical availability does not equate with obviousness. . ." (Br. 15-16).

We interpret this argument three different ways. First, we interpret this argument one way to mean Dufresne does not have an enabling disclosure. However, Appellants do not direct us to any persuasive factual evidence to support their allegation that Dufresne does not contain an enabling disclosure. *Beattie*, 974 F.2d at 1313. As such, this opinion evidence carries little weight.

Second, we interpret this argument to mean the cost of the offsite moving bed regenerator is a teaching away from combining Golem and Dufresne. However, merely because a combination would not be made by businessmen for economic reasons does not mean that one of ordinary skill in the art would not have been led to combine Golem and Dufresne for the above reasons. *See Farrenkopf*, 713 F.2d at 718.

Third, we interpret this argument to mean Dufresne does not enable or teach the concept of converting a fixed bed reforming unit to a moving bed catalytic reforming unit. We are not persuaded by this argument. It is well settled that one cannot show non-obviousness by attacking the references individually when the rejection is based on a combination of references. *Keller*, 642 F.2d at 426. In reference to our above discussion, the Examiner relies on Golem and not on Dufresne to teach the recited conversion from a fixed bed reforming unit to a moving bed catalytic reforming unit.

With respect to claims 1, 8, 11, 12, 18, 19, and 20, Appellants argue that

[t]he prior art contains no suggestion or implication that if the integrated regenerator . . . is omitted, as required by claims 1, 18, and 20, that lower pressure operation could be tolerated. . . Claims 8, 11, 12 and 19 specify the relative pressures before and after the conversion. . . . Neither Golem nor Dufresne . . . suggest operation of the truncated unit under the lower pressure regime.

(Br. 17-18). We disagree. Golem teaches in its examples that its fixed-bed design operates at 175 psig and its CCR Platforming unit converted via Full CCR Platforming conversion operates at 100 psig. (FF 3). This change in operating pressure from 175 psig to 100 psig amounts to a 43% decrease in operating pressure, which meets the features recited in claims 1, 11, 12, 18, 19, and 20.

With respect to claim 8, Golem teaches that "[t]he benefits of low-pressure reformer operations have been recognized for over 20 years." (FF 3). In other words, Golem teaches the importance of controlling the operating pressure (i.e., it is a result effective variable). Thus, determining optimum pressures, including the pressure required by claim 8, via routine

experimentation is well within the ambit of one of ordinary skill in the art and, thus, would have been obvious. *Boesch*, 617 F.2d at 276.

With respect to claims 4 and 20, Appellants argue that

[c]laims 4 and 20 are directed to the arrangement in which a single continuous regenerator integrated with one moving bed reactor stack is used for regenerating the catalyst from the moving bed unit lacking the regenerator. . . . This concept is not recognized in either Golem or Dufresne and must therefore be considered as unobvious under 35 USC 103.

(Br. 18). We disagree.

In reference to our above discussion, as stated above, Golem teaches a CCR Platforming unit, which was converted from a fixed-bed catalytic reforming unit, having a moving-bed stacked reactor and a regenerator. (FF 1). Golem also teaches that

[i]f the revamp is the first step . . . toward full CCR Platforming operations, the CCR regenerator is sized for . . . [the] future reactor stack that replaces the entire reactor train. The cost of the larger regenerator is significant and the project cost approaches that of a full CCR Platforming conversion.

(FF 5).

Dufresne teaches the offsite regeneration of a catalyst from a CCR process where the "catalyst progressively flows (circulating bed) through a number of reaction zones." (FF 6). Dufresne teaches that the catalyst to be regenerated is from "a continuous *and/or* semi-regenerative type reforming process." (FF 8). Thus, Dufresne plainly teaches that its offsite regeneration unit may be shared between two reforming processes. Indeed, Appellants acknowledge that "Dufresne's regenerator [is] shared . . . in the context of conventional type units." (FF 8).

In light of the combination of Golem and Dufresne discussed above, we additionally determine that it would have been obvious to use a well known integrated regenerator in a CCR platforming unit as taught by Golem for the off site regenerator of Golem and Dufresne's CCR unit. Doing so would have reduced costs as taught by Golem by not purchasing a separate regenerator for Golem and Dufresne's regeneration facility. As noted by the Examiner (Ans. 10), Dufresne's teaching to regenerate catalyst from different reforming processes in a common regenerator further supports this conclusion.

Therefore, it follows that Appellants have not shown reversible error in either of the Examiner's findings that Golem teaches the conversion scheme of replacing all of the fixed bed reactors with moving bed reactors and that Dufresne teaches catalyst handling facilities and the inlet and outlet of the moving bed reactor, or the Examiner's reason for employing Dufresne's offsite regenerator for Golem's onsite regenerator within the meaning of § 103(a).

Therefore, because the Examiner has established a prima facie case of obviousness, we determine that the burden properly shifted to Appellants to present persuasive arguments or evidence refuting the Examiner's prima facie case. We now consider Appellants' arguments and evidence of long-felt need.

ISSUE (2): Secondary Considerations: Long-felt need

Appellants refer to Dufresne and the NPRA 2003 Annual Meeting paper as evidence to support their argument that "[t]he technical problem of a cheaper alternative to full continuous reforming was long standing and recognized in the art." (Br. 14-15). Specifically, Appellants argue that

The fact that UOP recognized the problem but was unable to come up with a solution that embodied the advantages of moving bed

reactor operation without the huge cost of the moving bed regenerator, must surely be taken as evidence that the technical solution to the economic problem was not obvious to the highly skilled people in this art and that the problem persisted until the present invention was made. . . . The fact that Dufresne described offsite regeneration shortly before the present invention was made does not uniquely lead to the conclusion that Dufresne would have made the present invention obvious to the skilled person. . . . the prevalent perception in the art at least as late as 2003 [i.e., the publication date of the NPRA 2003 Annual Meeting paper] -- several years after Dufresne - was that if a moving bed reactor stack were provided, it had to be accompanied by an integrated regenerator.

(Br. 15). In other words, Appellants allege that their conversion method solves a long-felt need to find a low cost alternative to a full CCR Platforming conversion that has the advantages of a moving bed reactor operation without the huge cost of the moving bed regenerator. We disagree with Appellants' allegation that they have solved a long-felt need.

As correctly stated by the Examiner, the "combined [teachings of the prior art references] was enough motive for one skilled in the art to come up with a solution." (Ans. 8). In this regard, we, like the Examiner, find that Appellants have not shown that (1) that the long-felt need was a persistent one and was recognized by those skilled in the art and (2) that Appellants' invention satisfies the long-felt need. *See Gershon*, 372 F.2d at 539; *Cavanagh*, 436 F.2d at 496, respectively.

With respect to whether there is evidence that the alleged long-felt need was a persistent one and recognized by those skilled in the art, Appellants allege (App. Br. 15) that "[t]he economic pressure for a low

cost alternative to the full continuous unit was . . . recognized as early as 1989, the date of the Golem reference."

Appellants, however, direct us to no persuasive evidence recognizing the need for a low cost alternative to a full CCR Platforming conversion having the advantages of a moving bed reactor operation without the huge cost of the moving bed regenerator. In this regard, although Golem states (Golem, pp. 6 and 11) that its conversion method "provides an affordable approach to gain many of the benefits of CCR Platforming without purchasing a new unit" and that its CCR regenerator is "sized . . . for cost savings," these statements do not recognize the need for moving bed reactors without an onsite moving bed regenerator. Moreover, Appellants direct us to no other persuasive evidence that recognizes the need of having moving bed reactors without an onsite moving bed regenerator. Accordingly, we find that Appellants have not established that a persistent problem existed and was recognized by those skilled in the art.

With respect to whether there is evidence that Appellants have solved the alleged long-felt need, Appellants have provided no evidence to show that their conversion method is actually cheaper than any other conversion method. *Beattie*, 974 F.2d at 1313. Appellants' mere allegation of a cheaper alternative fails to provide persuasive evidence supporting such an allegation. Accordingly, we find that Appellants have not satisfied this third factor of establishing long-felt need.

Due to the absence of any persuasive factual evidence in support of factors (1) and (3) for establishing long-felt need, we determine that Appellants'

allegations of long-felt need constitutes unsupported opinion evidence. As such, they carry little weight.

Thus, it follows that the combination of Golem and Dufresne considered anew in light of Appellants' arguments and evidence of long-felt need would have been have been probative of nonobviousness.

Accordingly, based on the factual findings set forth in the Answer and above, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the Appellants' claimed subject matter within the meaning of 35 U.S.C. § 103.

ORDER

In summary, the § 103(a) rejection made by the Examiner is sustained. Accordingly, the Examiner's decision is affirmed.

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2009).

AFFIRMED

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